SIEMENS

PATENT
Attorney Docket No. 2003P17536WOUS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Inventor:	Michael Maschke	)	Group Art Unit:	3768
Serial No.:	10/587,671	)	Examiner:	J. F. Brutus
Filed:	July 27, 2006	)	Confirmation No.:	8478
Title	**DEVICE AND METHOD FOR TAKING A HIGH ENERGY IMAGE**	)		

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APPELLANTS' BRIEF UNDER 37 CFR 41.37

Sir:

This brief is in furtherance of the Notice of Appeal filed in this application on 15 July 2010.

1. REAL PARTY IN INTEREST - 37 CFR 41.37(c)(1)(i)

The real party in interest in this Appeal is the assignee of the present application, Siemens Aktiengesellschaft.

2. RELATED APPEALS AND INTERFERENCES - 37 CFR 41.37(c)(1)(ii)

There is no other appeal, interference or judicial proceeding that is related to or that will directly affect, or that will be directly affected by, or that will have a bearing on the Board's decision in this Appeal.

3. STATUS OF CLAIMS - 37 CFR 41.37(c)(1)(iii)

Claims canceled: 1 – 10.

Claims withdrawn but not canceled: None.

Claims pending: 11 - 24.

Claims allowed: none.

Claims rejected: 11 - 24.

The claims on appeal are 11 - 24. A copy of the claims on appeal is attached hereto in the Claims Appendix. Appellants respectfully appeal the final rejection of claims 11 - 24.

4. STATUS OF AMENDMENTS - 37 CFR 41.37(c)(1)(iv)

No amendment has been proposed to the claims since the mailing of the final office action on 16 March 2010. A response was filed without claim amendment under 37 CFR 1.116 on 14 May 2010, however, the rejections were sustained per the Advisory Action mailed on 28 June 2010.

5. SUMMARY OF THE CLAIMED SUBJECT MATTER- 37 CFR 41.37(c)(1)(v)

With reference by page and line number to the detailed description, and with reference to the figures, the following summary describes one or more exemplary embodiments disclosed in the Specification and which are covered by one or more specific claims, but it is to be understood that the claims are not so limited in scope.

5A. CONCISE EXPLANATION OF SUBJECT MATTER DEFINED IN INDEPENDENT CLAIM 11.

With reference to Figure 1, **independent claim 11** is directed to a medical device 1 (e.g., an x-ray system) for taking a high energy image of an object (e.g., patient body region) under a medical examination into which an adjuvant is insertable. Page 3, lines 9 - 13; page 4, line 13. The device includes an imaging unit (x-ray detector 3 and image processing unit 6) for taking the high energy image. See page 4, lines 15 - 17 and 24 - 27. A control unit 7 controls the taking of the high energy image. Page 5, lines 1 - 3. The control unit 7 is supplied with an identification code of the adjuvant via an input device and adapted to set operating parameters of the image unit according to the identification code. Page 5, lines 7 - 13; page 2, line 29 - page 3, line 7; page 3, line 11 - line 17.

5B. CONCISE EXPLANATION OF SUBJECT MATTER DEFINED IN INDEPENDENT CLAIM 20.

With reference to Figures 2 - 4 and 7, **independent claim 20** is directed to a method for taking a high energy image (e.g., with an x-ray system) of an object (e.g., patient body region) under medical examination containing a medical adjuvant. Page 3, lines 9 - 13. The taking of the high energy image is controlled by an imaging unit via a control unit (image processing unit 6 and system controller 7). See page 4, lines 24 - 27; page 5, lines 1 - 3. An identification code of the medical adjuvant is input into the control unit. Page 5, lines 7 - 13. See, also, page 7, lines 4 - 8 and Figure 3 which references inputting 30 of the identification code. Operating parameters of the imaging unit are set via the control unit according to the identification code. Page 5, lines 7 - 13 and reference to database 12; page 5, line 19 - page 6, line 22. The high energy image is taken by the imaging unit. Page 3, lines 11 - 13; page 7, line 10.

6. GROUNDS OF REJECTION TO BE REVIEWED UPON APPEAL - 37 CFR 41.37(c)(1)(vi)

The sole round of rejection to be reviewed is whether claims 11 - 24 are unpatentable under 35 U.S.C. Section 103 over Anderson (U.S. U.S. Patent No. 6,394,952) in view of Binkert (2003/0197734) or Murphy (2003/0204248).

7. ARGUMENT 37 CFR 41.37(c)(1)(vii)

APPELLANTS TRAVERSE ALL REJECTIONS BASED IN WHOLE OR PART ON ANDERSON (US Patent 6,394,952) IN VIEW OF BINKERT (US Pub. App. 2003/0197734) OR MURPHY (US Pub. App. 2003/0204248).

Patentability of Each Claim is to be Separately Considered

Appellants urge that, to the extent the claims are separately argued, patentability of each claim should be separately considered. General argument, based on deficiencies in the rejection of the independent claims 11 and 20 demonstrates patentability of all dependent claims. However, none of the rejected claims stand or fall together because each dependent claim further defines a unique combination that patentably distinguishes over the art of record. For this reason, the Board is requested to consider all argument presented with regard to each dependent claim. To the extent provided, argument demonstrating patentability of each dependent claim is presented under subheadings identifying each claim by number.

General Basis To Overturn All Rejections Under Section 103

In order to sustain the rejections under Section 103, MPEP §2143 provides that three criteria must be met to establish a prima facie case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one skilled in the art, to modify the reference or to combine teachings of the references. Second, there must be a reasonable expectation of success. Third, the prior art must

teach or suggest **all** of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be both found in the prior art and not in the applicant's disclosure.

Therefore it is both fundamental and essential that all of the claimed features be found in the prior art combination in order to make a rejection. Yet this appeal is made because the prior art combination used to reject the claims fails to provide all of the features and functions recited in each claim.

7A. APPELLANTS TRAVERSE THE REJECTION OF INDEPENDENT CLAIMS 11 and 20

7A(1). REJECTION OF INDEPENDENT CLAIM 11 UNDER SECTION 103 BASED ON ANDERSON IN VIEW OF BINKERT OR MURPHY IS IN ERROR.

Appellant submits that the art rejection does not and cannot identify every feature of independent claim 11 and the claims which depend therefrom. The following discussion illustrates how the rejection fails to identify a key feature recited in claim 11 which constitutes a fatal deficiency in the rejection of claim 11. Claim 11 requires:

a control unit which controls the taking of the high energy image, the control unit supplied with an identification code of the adjuvant via an input device and adapted to set operating parameters of the image unit according to the identification code.

Despite argument to the contrary the rejection of claim 11 still lacks explanation as to how one could possibly meet the above-quoted terms based on the Examiner's combination. It is not at all apparent how the references can be combined to render independent claim 11 obvious. There is no demonstration as to where, among the three references, one could possibly find the features of

> ... a **control unit** which controls the taking of the high energy image, the control unit supplied with **an identification code** of the **adjuvant** via an input device and **adapted to set operating**

parameters of the image unit according to the identification code

Although the Anderson reference may disclose subject matter relating to symbology and bar codes, the office action also acknowledges that this is not in the context of controlling the taking of a high energy image. As noted in the abstract of Anderson, the disclosure concerns systems for reading and evaluating test data, and software for converting data into diagnostic or risk assessment information. The rejection notes disclosure of a reader device for reading an immunoassay test strip and a symbology (bar code). See page 2 of the final office action. The Anderson reference makes use of bar code reading in a context unrelated to claim 11. The reference has no relationship to the claimed subject matter. To reject claim 11, the rejection must show that Binkert (which concerns taking an image of a stent graft) and Murphy (which concerns imaging of a stent) somehow compensate for the deficiencies of Anderson.

Specifically, there is no disclosure in the Anderson reference of a **control unit** in the context of setting operating parameters for anything, let alone an imaging unit. Thus it is not seen how one can construct a prima facie case of obviousness using this combination.

Specifically, it is not seen how
a processing and control unit - - programmed to read an immune-assay device - - can be used to for controlling x-ray operations. Even if it could, the invention is not rendered obvious by the piecemeal finding of a control unit in an unrelated application (reading immunoassay devices) and then merely locating a reference that describes CT or MR imaging (e.g., Blinkert or Murphy). This is not what the law on obviousness is about. There is no motivation in the art to combine the references; and second, the resulting combination would be no more than a failed attempt to control a high energy x-ray device with an immunoassay reader.

Further, there is no relation between any of the prior art (alone or in combination) and Appellant's teaching of setting operating parameters of the image unit according to the identification code.

In a response to applicant's argument the Examiner (see page 5 of the final office action) proposes that Anderson intends that the disclosed test strip refers to any means on which data is generated. Even if this is so, it does not relate to *controlling* of a device which takes images. As indicated in the cited passage (col. 18, lines 17-29) the Anderson reference refers to

means on which data is generated, recorded or displayed. The Examiner incorrectly extends the Anderson reference to setting parameters for the acquisition of an image containing a medical adjuvant.

Without citing any support the Advisory Action contends that the control unit of Anderson "is capable of" controlling CT or MR imaging. Any modification can be argued based on a piecemeal reconstruction made with hindsight knowledge of Appellant's teachings. Moreover, contrary to assertions made in the Advisory Action, there is no motivation in the art of record to modify the Anderson reference to set operating parameters of an image unit for a high energy image according to the identification code of an adjuvant.

For at least these reasons it is submitted that the rejection of claim 11 should be overturned.

7A(2). REJECTION OF INDEPENDENT CLAIM 20 UNDER SECTION 103 BASED ON ANDERSON IN VIEW OF BINKERT OR MURPHY IS ALSO IN ERROR.

For reasons similar to those presented for claim 11 (above), the rejection of claim 20 and each claim which depends therefrom should also be overturned. Appellant submits that the art rejection cannot identify every feature of independent claim 16. The following discussion illustrates how the rejection fails to identify all of the features recited in claim 16.

Claim 20, directed to a method for taking a high energy image of an object under medical examination containing a medical adjuvant, requires:

> ... **controlling** the taking of the high energy image by an imaging unit **via a control unit;**
> **inputting an identification code of the medical adjuvant** into the control unit;
> **setting operating parameters of the imaging unit via the control unit according to the identification code** ...

Based in part on argument made against the rejection of claim 11, it can be said that, at best, the rejection only goes so far as to argue that all of this is obvious. Although the Anderson

reference may disclose subject matter relating to symbology and bar codes, this is not in the context of controlling the taking of an image. Simply contending that Binkert concerns taking an image of a stent graft, and that Murphy concerns imaging of a stent does not compensate for the deficiencies of Anderson. Specifically, there is no disclosure in any of the prior art for

> **inputting an identification code of the medical adjuvant** into the control unit;

Nor is there any disclosure in the prior art for:

> **setting operating parameters of the imaging unit via the control unit according to the identification code** ...

Thus it is not seen how one can construct a prima facie case of obviousness to reject claim 20 using this combination.

The Anderson reference may disclose subject matter relating to symbology and bar codes, but this is not in the context of controlling the taking of a medical image. Simply contending that Binkert concerns taking an image of a stent graft, and that Murphy concerns imaging of a stent does not compensate for the deficiencies of Anderson. Specifically, there is no disclosure in the Anderson reference of a **control unit** in the context of setting operating parameters of an image unit according to an identification code, let alone a recognition of an advantage of doing so. Thus it is not seen how one can construct a prima facie case of obviousness using this combination. There is no suggestion in the prior art for setting imaging parameters for a medical adjuvant when taking images. The rejection does not provide proper support for rejecting these features. The rejection of claim 20 should be overturned.

7B. THE REJECTION UNDER SECTION 103 OF EACH DEPENDENT CLAIM, ALSO BASED ON ANDERSON IN VIEW OF BINKERT OR MURPHY, IS ALSO IN ERROR.

To the extent that any claim dependent claim is not separately argued herein the Board may consider that claim as rising or falling with the claim from which it depends.

7B(1) CLAIM 12 IS ALLOWABLE UNDER SECTION 103.

Claim 12 requires that the control unit combines the operating parameters associated with the identification code with data concerning the object under the medical examination. The final rejection does not appear to make any argument against patentability of this subject matter.

7B(2) CLAIM 13 IS ALLOWABLE UNDER SECTION 103.

According to claim 13, the operating parameters are stored in a memory that is accessible by the control unit. The prior art combination does not relate to storage of operating parameters according to an identification code for an imaging unit. It is not seen that the rejection addresses this feature.

7B(3) CLAIM 16 IS ALLOWABLE UNDER SECTION 103.

According to claim 16, the medical device has an operating condition that displays the adjuvant. The rejection does not appear to address these features.

7B(4) CLAIM 18 IS ALLOWABLE UNDER SECTION 103.

Claim 18 requires that a contrast agent concentration in the object is displayed via the imaging unit. None of the argument at page 4 of the final office action appears to relate to this subject matter.

7B(5) CLAIM 21 IS ALLOWABLE UNDER SECTION 103.

Claim 21 recites that the operating parameters associated with the identification code are combined in the control unit with data concerning the object under medical examination. The final rejection does not appear to make any argument against patentability of this subject matter.

7B(6) CLAIM 23 IS ALLOWABLE UNDER SECTION 103.

Claim 23 recites displaying a contrast agent concentration within the object in the x-ray image. None of the argument in the final office action appears to relate to this subject matter.

7C. CONCLUSIONS

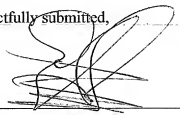
Argument has been presented to demonstrate that the rejections under Section 103 are deficient and that numerous ones of the dependent claims further distinguish over the prior art. The Examiner has argued rejections when claimed features are not obtainable from the prior art. For the reasons presented, there cannot be a prima facie case of obviousness and none of the rejections can be sustained. All of the rejections should be overturned and all of the claims should be allowed.

8. APPENDICES

An appendix containing a copy of the claims involved in this appeal is provided herewith. No evidence appendix or related proceedings appendix is provided because no such evidence or related proceeding is applicable to this appeal.

Respectfully submitted,

Dated: 9/15/10

By: 

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9. APPENDIX OF CLAIMS ON APPEAL

11. A medical device for taking a high energy image of an object under a medical examination into which an adjuvant is insertable, comprising:

an imaging unit for taking the high energy image; and

a control unit which controls the taking of the high energy image, the control unit supplied with an identification code of the adjuvant via an input device and adapted to set operating parameters of the image unit according to the identification code.

12. The medical device according to Claim 11, wherein the control unit combines the operating parameters associated with the identification code with data concerning the object under the medical examination.

13. The medical device according to Claim 11, wherein the operating parameters are stored in a memory that is accessible by the control unit.

14. The medical device according to Claim 11, wherein the input device is a scanner.

15. The medical device according to Claim 14, wherein the scanner is a barcode reader.

16. The medical device according to Claim 11, wherein the medical device has an operating condition that displays the adjuvant.

17. The medical device according to Claim 11, wherein a stent and an adjacent region within the object are displayed via the imaging unit.

18. The medical device according to Claims 11, wherein a contrast agent concentration in the object is displayed via the imaging unit.

19. The medical device according to Claims 11, wherein the object is a patient.

20. A method for taking a high energy image of an object under medical examination containing a medical adjuvant, comprising:

controlling the taking of the high energy image by an imaging unit via a control unit;

inputting an identification code of the medical adjuvant into the control unit;

setting operating parameters of the imaging unit via the control unit according to the identification code; and

taking the high energy image by the imaging unit.

21. The method according to Claim 20, wherein the operating parameters associated with the identification code are combined in the control unit with data concerning the object under medical examination.

22. The method according to Claim 20, further comprising displaying a stent and an adjacent region within the object in an x-ray image taken by the imaging unit.

23. The method according to Claims 22, further comprising displaying a contrast agent concentration within the object in the x-ray image.

24. The method according to Claim 20, wherein the object is a patient.

10. EVIDENCE APPENDIX - 37 CFR 41.37(c) (1) (ix)

None

11. RELATED PROCEEDINGS APPENDIX - 37 CFR 41.37(c) (1) (x)

None